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EXAMINER	
SCHEUERMANN, DAVID W	
ART UNIT	PAPER NUMBER
2834	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,313	ERFOURTH, ERIC J.	
	Examiner	Art Unit	
	David W. Scheuermann	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/14/06* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 15-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *25,27 and 34* is/are allowed.

6)☒ Claim(s) *1-13,15-24,26,27,29-33 and 35-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/14/2006 have been fully considered but they are not persuasive. Claims 1-13,15-23 and 35-40 are rejected under 112 and101 as there is no indication or teaching or other evidence to show how the moving magnetic field on the rotor creates a DC current absent the inclusion of a rectifier (e.g., commutator, diode network, etc.). The photograph applicant submitted on 3/9/2006 showing a magnetic field is not sufficient evidence to overcome the rejection under 101 and 112. Additionally, Exhibit A filed on 12/14/2006 also is non persuasive in demonstrating that the device functions to generate electrical power. Note for example, teaching evidence showing a rotating magnet generating an AC current. When a magnet pole approaches the coil current moves in a first direction in the coil, when a magnet pole moves away from the coil current moves in a second and opposite direction in the coil. Reversing the polarity of the poles in the rotating magnet will still result in the generation of an AC current. Since there is no mention or discussion of a rectification device, the examiner is not convinced that the apparatus as claimed can produce a DC current by the mere " inversion of magnetic poles." Applicant asserts that, "Evidence abounds in the Office Action including the repeated application of inapplicable art to the claims, the continued reliance of the rejection on the phrase , " inversion of magnetic poles" which is completely removed from all claims" The Examiner disagrees with this assertion because the claims are interpreted in light of the specification and in the present specification on page 7, lines 2-3 applicant states, " ...at least one exciter resides and that **are reconfigurable for alternating current** or direct current operation by **inversion of respective magnetic poles.**" Thus applicant teach that, " **reconfigurable for alternating current**" which is present in claim 1, line 9, may be interpreted as " **inversion of magnetic poles,**" as precisely taught by the applicant in the specification.

Applicant asserts that, "in the DC configuration of magnets, there is a constant and uniform magnetic field in the region of the exciters." The examiner is unable to understand how any voltage potential is generated in a " constant and uniform" magnetic field. Exhibit A, submitted on 12/14/2006 fails to elicit an understanding of the operation of the device.

Applicant uses the term " exciter" in a way that is not found in the prior. Generally exciter means: An auxiliary generator used to provide field current for a larger generator or alternator, or as applicant has pointed out " magnet coil" " excitation coil," or " induction coil" on page 13 of the remarks filed on 12/14/2006. Applicant, hovever, uses the term as the coil in which the output current is generated. The examiner has found no evidence in the prior art of the term " exciter " being used to refer to a helical winding. However, since all windings of more than one turn can be said to be helical the examiner has used prior art coils to meet the limitation of " exciters" as set forth in the claims. If applicant is aware of any use of the term " exciter " in the prior art which is in accord with the claimed meaning the examiner requested this evidence be provided to aid in the assessment of this invention. Applicant asserts that, "the record is absolutely clear on the difference between exciters and coils." The Examiner disagrees with this assertion because there is no supporting evidence other than Applicants own specification and remarks. In spite of the numerous attempts by applicant to explain what is meant by " exciter" the examiner has distilled it to a coil, which is used to conduct output power. Consultation with other examiners at the Patent Office has also failed to elicit any further meaning. Furthermore, searching the prior art has failed to supply outside evidence, or other supporting evidence showing a clear line of demarcation between " exciters" and coils. Thus, the examiner suggests Applicant spell out in the claims exactly what limitation are to be encompassed by exciter in addition to a coil which is used to conduct output power. Applicant states that the presently claimed exciter has continuity to a conductive core. The examiner is

not clear on what this means. No circuit or current path has been established or explained in the specification.

Furthermore, the examiner is not convinced that a coil moving in a constant and uniform magnetic field would generate any voltage potential at all. The examiner requests better evidence that an electric potential is generated across the terminals.

The cited art, entitled, Moving Magnet Generator demonstrates that a moving magnet passing a coil generates an AC current. Reversing the magnet poles of the permanent magnet will not cause the device to generate DC.

The examiner must use the broadest reasonable interpretation when reading the claims. Note Section 2111 of the MPEP reproduced below, in part, for convenience:

> CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE INTERPRETATION
>
> During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969)

Thus the term "exciter" or "short helical lead wire" is sufficiently broad enough to read on the windings or coils of Adám et al., EP429729A1. The record remains unclear on a line of demarcation separating "exciter" or "short helical lead wire" from coils.

Re claims 24, 26, 27 and 29, for the reasons cited above, the term "exciter" or "short helical lead wire" is sufficiently broad enough to read on the windings or coils of Fukada, US 6147415.

Re claim 30 the argument that Adam does not show a helical coil is not persuasive because in the examiners mind all coils are inherently helical.

Thus, the previous rejections are proper and are maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13,15-23 and 35-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims recite that the magnets are "reconfigurable for alternating current operation" meaning " inversion of respective magnetic poles", see specification page 7, lines 2-3. There is neither full nor clear written description describing how this DC voltage is generated. The current in the exciter would increase

as the magnet supplied field increases on the approach and decrease after maximum magnet field intensity is reached (when the magnet moves away from the exciter). This results in an alternating current regardless on how the magnets are orientated. Furthermore, it is not clear how the capacitor switching arrangement yields a DC output as no schematic is shown. Finally, the applicant alleges that the field is constant and uniform in page 11 of the response filed on 12/14/2006. If the field is constant and uniform it is unclear how any voltage potential is generated either AC or DC.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-13,15-23, and 35-40 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility.

Claim 1 recites a , " **reconfigurable for alternating current**" see claim 1, line 9, for example, which may be interpreted as " **inversion of magnetic poles,**" as precisely taught by the applicant in the specification. The claims are interpreted in light of the specification and in the present specification on page 7, lines 2-3 applicant states,

" ...at least one exciter resides and that **are reconfigurable for alternating current** or direct current operation by **inversion of respective magnetic poles.**"

There is neither full nor clear written description describing how this AC or DC voltage is generated. The current in the exciter would increase as the magnet supplied field increases on the approach and decrease after maximum magnet field intensity is reached (when the magnet moves away from the exciter). This results in an alternating current regardless on how the magnets are orientated. Thus, one of ordinary skill in the art could not use the invention as described in the current disclosure without undue experimentation.

Claims 1-13,15-23, and 35-40 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

When a patent applicant presents an application describing an invention that contradicts known scientific principles, or relies on previously undiscovered scientific phenomenon, the burden is on the examiner simply to point out this fact to the appellant. The burden shifts to appellant to demonstrate either that his invention, as claimed, is operable or does not violate basic scientific principles, or that those basic scientific principles are incorrect. *As stated by the Patent Office Board of Appeals, Newman v. Quigg 681 F.Supp 16, at18, 5 U.S.P.Q. 2d 1880(1988).*

Evidence (e.g., photo, circuit diagram, oscilloscope reading etc.) is requested to demonstrate the operability of the device in the DC mode without rectification means.

Evidence A, submitted on 12/14/2006, is insufficient to demonstrate the operability because it does not teach how to make the device as claimed.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30 and 33 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Adám et al., EP429729A1. Adám et al. show:

An exciter 2 coupled configuration of a permanent magnet generator (note the second paragraph in column 2) wherein the exciter configuration comprises:

An exciter mainframe (inherent);

At least one exciter element 2 coupled to the mainframe; and

at least one short (unbiased comprarison therefore has little weight) helical (any coil which extends more the one loop in a direction axially can be considered a helical winding) lead wire (note leads extending from each end of loops 2), the at least one short helical lead wire coupled to the at least one exciter.

Re claim 33, note that exciter 2 includes a core that is formed of a strip of insulated dynamo sheet rolled into a tight spiral, (see abstract), the insulation would be the thin first material while the iron sheet would be the second material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adám in view of Nahirney, US 5227702. Adám discloses the invention substantially as claimed as set forth in the rejection of claim 30, supra. Adám does not expressly disclose, "...wherein the at least one exciter comprises at least 120 exciters". Nahirney discloses that different number of electromagnetic coils (exciters) and permanent magnets can be used to design a motor for various applications, for the inherent purpose of optimizing performance. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use 120 exciters on the generator of Adám. One of ordinary skill in the art would have been motivated to do this optimize performance.

Furthermore, the courts have established via, *in re* Aller, 105 USPQ 238 (CCPA 1955) the courts have established that, "...even though applicant's modification results in great improvement and utility over prior art, it may still not be patentable if modification was within capabilities of one skilled in art; more particularly, where general conditions of claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation.

Claims 24, 26, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukada, US 6147415 in view of logical reasoning set forth below. Fukada shows:

A permanent magnet generator (see figure 3) comprising:

An exciter mainframe 31b;

A first at least one exciter (just above arm 26, figure 3) element to the exciter mainframe and residing in a first air gap, the first at least one exciter element to at least one short helical lead wire (Inherent. The exciter is attached or connected to a circuit or load. The attachment conductor could properly be called a wire);

A second at least one exciter (just below arm 26, figure 3) element to the exciter mainframe and residing in a second air gap, the second at least one exciter element to at least one short helical lead wire (Inherent. The exciter is attached or connected to a circuit or load. The attachment conductor could properly be called a wire);

A first [reconfigurable] magnet 25;

A second [reconfigurable] magnet 27;

A connecting arm 26 coupled to the first [reconfigurable] magnet and the second [reconfigurable] magnet; and

A drive shaft coupled to the connecting arm; and

Wherein the first [reconfigurable] magnet includes a first magnet having a first magnetic pole and a second magnetic pole, and the second [reconfigurable] magnet includes a first magnetic pole and a second magnetic pole, the first and second

magnetic poles of the first magnet facing the magnetic poles of the first [reconfigurable] magnet.

Note that bracketed limitations are not expressly disclosed in Fukada. The qualifier "short helical" lead wire, is not clear. It appears to be a typo, both instances, because the exciter is already comprised of a "short helical winding" as per the Remarks paper filed on 5/9/06.

Although the magnets are not expressly disclosed as "reconfigurable", in column 7 lines, 20-24, permanent magnet attachment plates are mentioned, which would lead one to consider that a damaged magnet could be replaced. Since many of the magnets are the same size as shown in figure 11, for example, it would seem obvious that should one magnet be damaged it would be replaced by an similar magnet. Furthermore, a balanced pair of magnets might be removed, should only one be damaged, to keep the drive shaft balanced while awaiting replacement magnets.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to "reconfigure" the magnets in the generator of Fukada. One of ordinary skill in the art would have been motivated to do this maintain operability while waiting for replacement of a damaged magnet.

Re claim 27, note that roof 11 and support shafts 11 form a housing for the generator.

As to claims 26 and 29, note that there are a plurality of permanent magnets circumferentially disposed as shown in figure 11.

Allowable Subject Matter

Claims 25, 28 and 34 are allowable.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is 571-272-2035. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached at (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 13, 2007